ATTIX5

SharePoint Backup Guide

for Microsoft Windows

Backing up and restoring SharePoint sites and content databases using Attix5 Pro.

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Background

Microsoft SharePoint is a complex application which can be difficult to back up effectively. There are many sources of conflicting information for SharePoint backup, and the recommended method of backup from Microsoft differs depending on the SharePoint database sizes and configuration.

This guide contains the recommend practice and configuration steps for backing up and restoring using Attix5 Pro. It is split into different settings for the different backup and restore methods, but you are advised read through the entire guide.

Overview

Things to keep in mind:

- Synchronise your SharePoint environment with a separate Active Directory domain controller and back this up separately.
- Non-Active Directory environments are supported, but client permissions will likely need to be reset after restoring.
- SharePoint content databases should be selected for backup using the MS SQL plug-in.
- SharePoint installations that use Windows Internal Database are not supported.
- VSS backups of content databases are not supported.
- The SharePoint Recycle Bin should still be the first method to try for document restore.
- Unattached Content Database Restores are supported in SharePoint 2010 using the backed up content databases.
- Site and document centre level restores are supported in SharePoint 2007 and 2010 using the backed up content databases.
- IIS backups may be useful, and are supported using the script plug-in.

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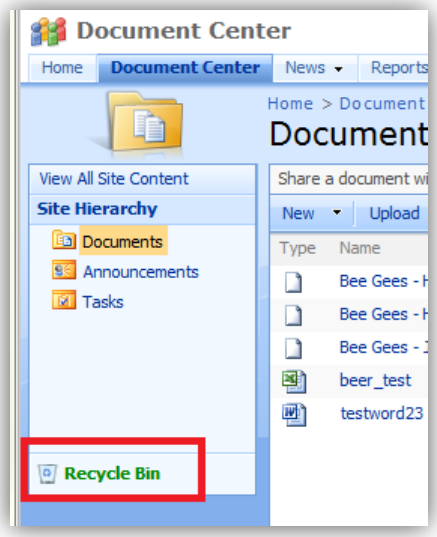
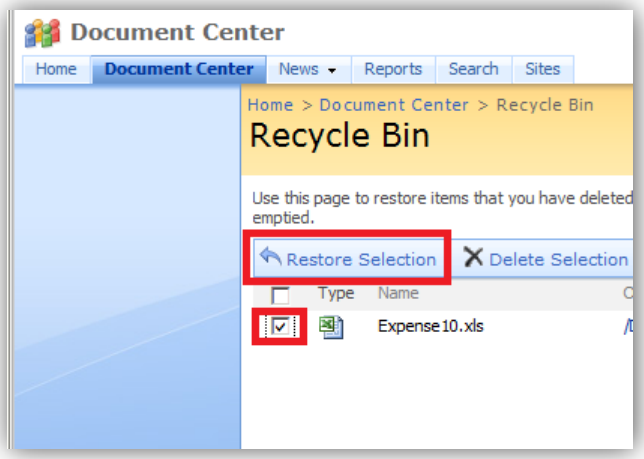
Deleted item recovery

Recycle Bin

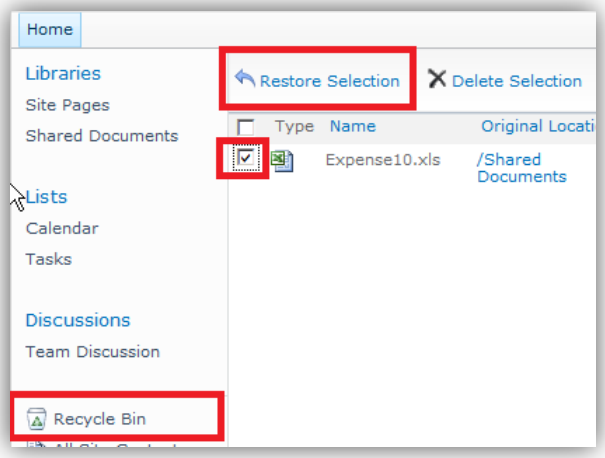
If you want to recover a deleted file, you should first check the SharePoint Recycle Bin. Navigate to the SharePoint Recycle Bin (located in the left hand navigation panel by default), select the appropriate document and the click **Restore Selection**.

SharePoint 2007





SharePoint 2010



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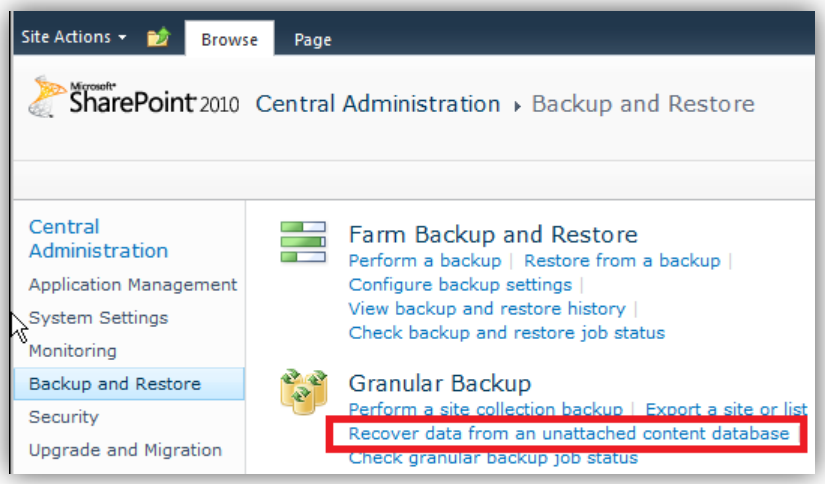
If you are running SharePoint 2010 and cannot recover your file from the SharePoint Recycle Bin, you can attempt to recover from an Unattached Content Database.

Unattached Content Database restore

Note: See below for details on backing up SharePoint content databases.

To perform an Unattached Content Database Restore you should first restore the SharePoint content database to the SQL server, making sure to use a different name to the production content database.

1. Go to SharePoint **Central Administration**, and from there to **Backup and Restore**. Click **Recover data from an unattached content database**.



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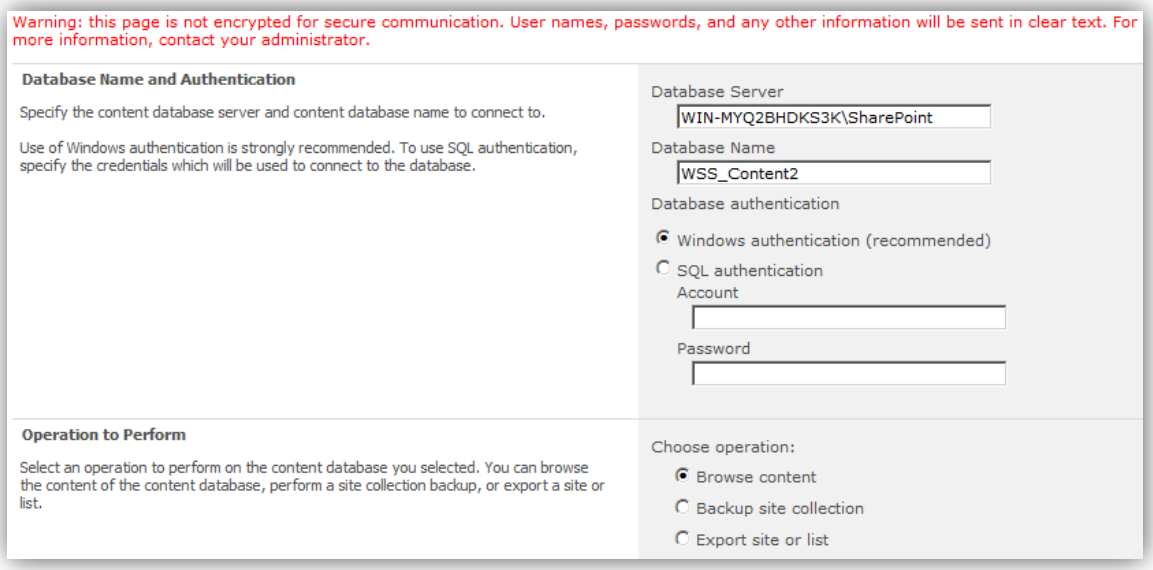
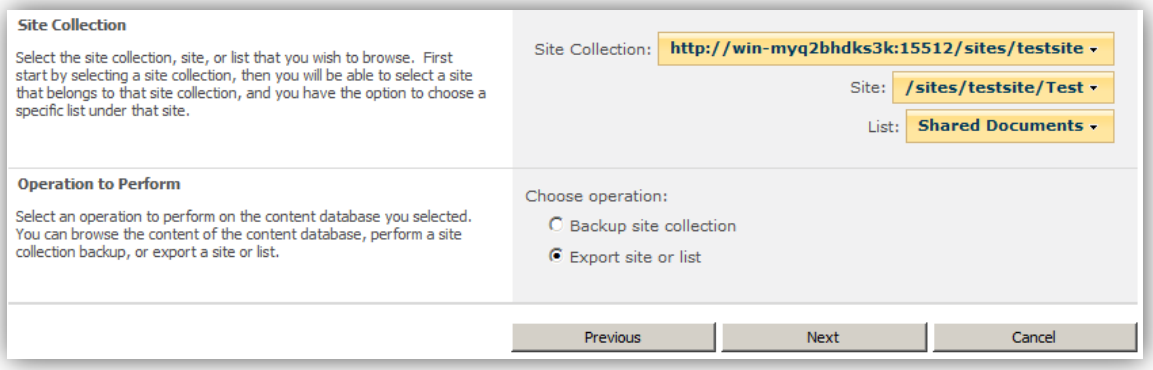
2. Enter the database name and appropriate SQL authentication details. Select **Browse content** to inspect the contents of the database.


Warning: this page is not encrypted for secure communication. User names, passwords, and any other information will be sent in clear text. For more information, contact your administrator.
Database Name and Authentication
Specify the content database server and content database name to connect to.
Use of Windows authentication is strongly recommended. To use SQL authentication, specify the credentials which will be used to connect to the database.
Database Server
WIN-MYQ2BHDKS3K\SharePoint
Database Name
WSS_Content2
Database authentication
Windows authentication (recommended)
SQL authentication
Account
Password
Operation to Perform
Select an operation to perform on the content database you selected. You can browse the content of the content database, perform a site collection backup, or export a site or list.
Choose operation:
Browse content
Backup site collection
Export site or list

3. You should now select the site collection within the database, **Export site or list**, and then click **Next**.


Site Collection
Select the site collection, site, or list that you wish to browse. First start by selecting a site collection, then you will be able to select a site that belongs to that site collection, and you have the option to choose a specific list under that site.
Site Collection: http://win-myq2bhdks3k:15512/sites/testsite
Site: /sites/testsite/Test
List: Shared Documents
Operation to Perform
Select an operation to perform on the content database you selected. You can browse the content of the content database, perform a site collection backup, or export a site or list.
Choose operation:
Backup site collection
Export site or list
Previous
Next
Cancel

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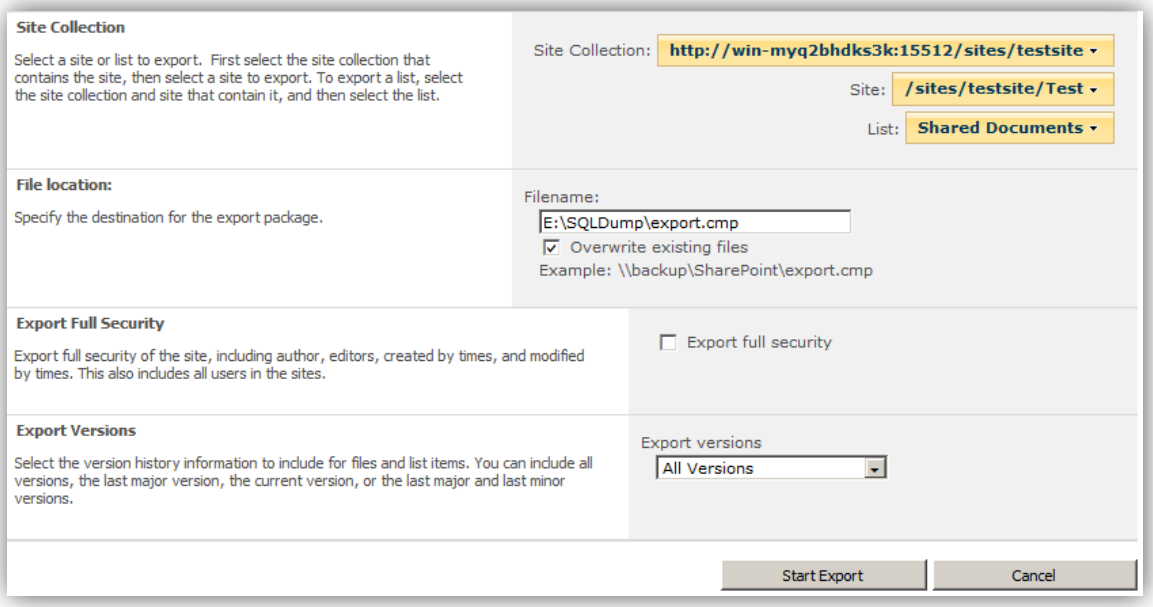
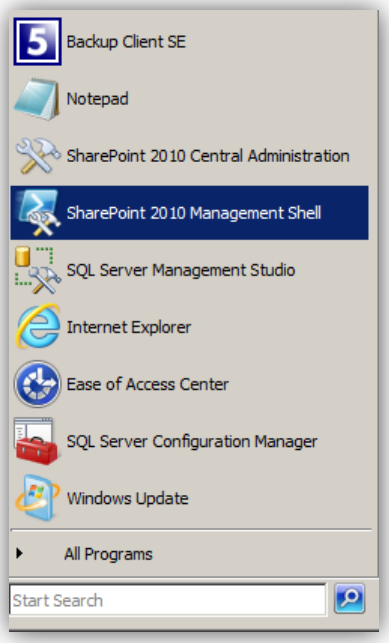
4. Specify the location where the site or list will be exported to in the **Specify the destination for the export package.** box. SharePoint and the SQL Instance need to be able to write to this location, so the SQL dump location can be useful for this purpose. Click **Start Export**.


Site Collection
Select a site or list to export. First select the site collection that contains the site, then select a site to export. To export a list, select the site collection and site that contain it, and then select the list.
Site Collection: http://win-myq2bhdks3k:15512/sites/testsite
Site: /sites/testsite/Test
List: Shared Documents
File location:
Specify the destination for the export package.
Filename:
E:\SQLDump\export.cmp
Overwrite existing files
Example: \\backup\SharePoint\export.cmp
Export Full Security
Export full security of the site, including author, editors, created by times, and modified by times. This also includes all users in the sites.
Export full security
Export Versions
Select the version history information to include for files and list items. You can include all versions, the last major version, the current version, or the last major and last minor versions.
Export versions
All Versions
Start Export
Cancel

5. When the export completes, launch the SharePoint 2010 Management Shell, which can be found in the Start menu.



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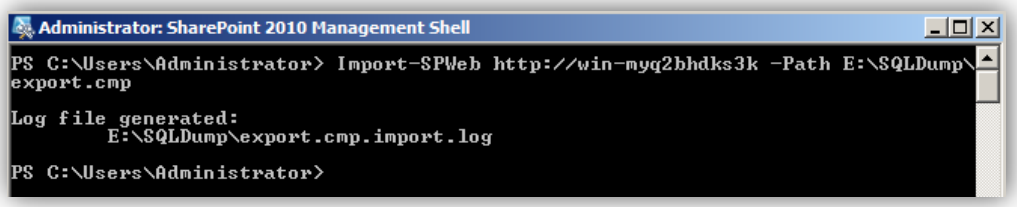
6. You can now use the Import-SPWeb cmdlet to import the exported library using the following syntax:

   `Import-SPWeb <URL> -Path <path to exported library>`

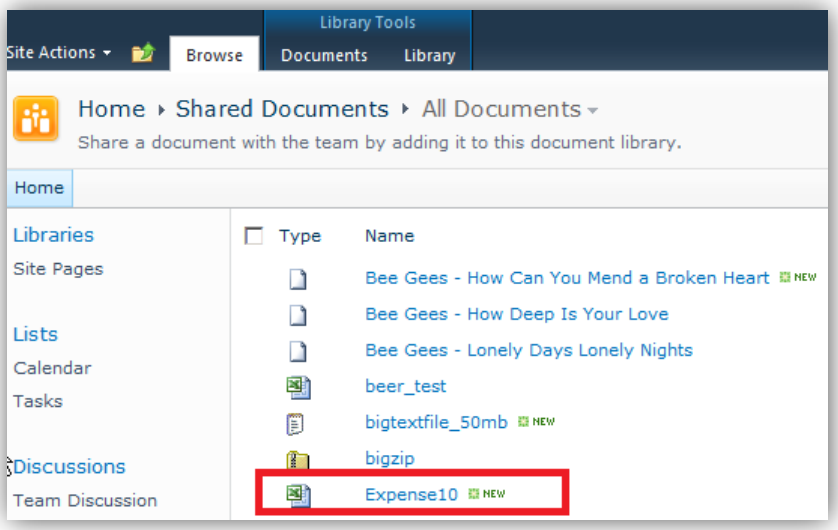
   E.g:

   `Import-SPWeb http://win-myq2bhdk3sk -Path E:\SQLDump\export.cmp`



> ***Note:*** *When importing, please consider the following:*
> - *It is not possible to import only a single document; a site/list library must be imported.*
> - *Libraries cannot be restored to different names, so if they were exported as "Shared Documents" they will be imported as "Shared Documents".*
> - *If a site exists under the same name at the specified URL, the contents will be merged and will create new document versions where possible.*
> - *It is possible to specify an alternate site to restore the library to.*

7. After restoring, browse to the imported library to access the restored document.



8. The temporary database, exported library and any temporary sites can now be deleted.

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Backing up and restoring SharePoint sites and content DBs

Background

This section demonstrates how to back up SharePoint content databases, which contain site data, and how these can be restored into a fresh SharePoint installation. It does not demonstrate how to restore the configuration database or any site settings.

The SharePoint configuration database is often not restorable into a usable state. The configuration and settings required by SharePoint includes security IDs and settings that are unique to the installation. Whilst some of these details are restored in a Windows Server Backup System State restore, the machine onto which they are restored may not be able to run an existing, or install a fresh installation of SharePoint without an extensive clean-up of SharePoint and SQL components.

It is therefore simpler not to restore the System State on a machine that uses standalone authentication (i.e. is not part of Active Directory), but rather to complete a fresh SharePoint installation and add the restored SharePoint content databases to the new installation.

A replacement Active Directory server can be joined into the domain, so should not require a system state restore. SharePoint can then be installed as normal, with content databases restored to it.

Backing up and restoring with Active Directory

If the SharePoint server is an Active Directory member, it is recommended to configure a separate machine as Domain Controller, with an Active Directory user as Site Collection Administrator, and to configure Active Directory Synchronisation within SharePoint. The required steps for this are beyond the scope of this guide.

The Active Directory Domain Controller system state must also be backed up to ensure the domain is available in the event of disaster.

When using Active Directory, the restored users permissions within the restored content database will correspond to the security IDs of Active Directory, so will be available for the SharePoint server to authenticate, and will allow users to access the sites and documents. Attix5 recommends that you use Active Directory users within SharePoint.

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Backing up and restoring without Active Directory

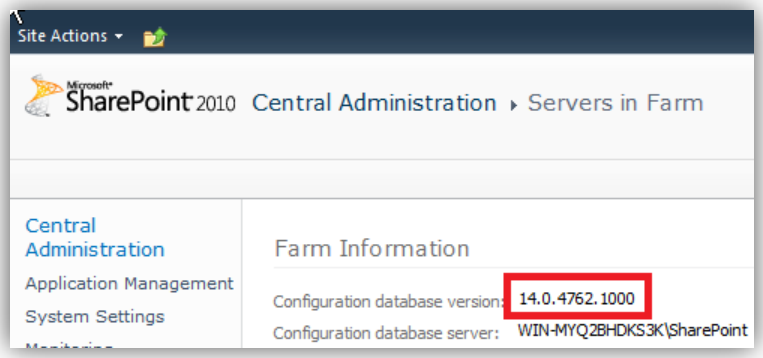
If standalone users are assigned site and document permissions within SharePoint, the restored user permissions and security IDs will not correspond to the user security IDs present on the machine. User permissions must be rebuilt after the site restore in order to allow the users to access the sites and documents.

Important note on SharePoint versions

SharePoint will not allow databases backed up with one version of software to be restored with another version of software. E.g. a database backed up with SharePoint version 12.0.0.6661 cannot be restored to SharePoint version 12.0.0.6219. It is strongly recommended that you document the running version of SharePoint.

In SharePoint 2007, the version can be found in **Central Administration > Operations > Servers In Farm** under **Version**.

In SharePoint 2010, the version can be found in **Central Administration > System Settings > Servers in Farm** under **Configuration database version**.



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SharePoint can be automatically upgraded by Windows Update without notifying the user. Attix5 recommends setting Windows Update to only download updates automatically, and install only when manually triggered by an administrator. Without knowing the correct SharePoint version, you will find have difficulty completing a restore.

SharePoint 2007

Backup

1. Using the MS SQL plug-in, select the content databases you wish to back up. Maintenance should be set to "NONE".
2. When the backup runs, the MS SQL plug-in will write the database out to disk, allowing it to be patched in the normal way.

Notes:

- *The VSS plug-in is not currently supported.*
- *If SharePoint uses the Windows Internal Database, also known as SQL Server Embedded Edition (SSEE), this is not currently supported.*

Restore

In a non-DR scenario, e.g. where a content database has been corrupted, a SQL-level restore of the content database can be performed. In a full DR scenario where the machine itself has been lost, follow these steps:

1. Install Windows onto a new machine.
2. Install SharePoint, making sure that the version matches that of your backed up database.
3. Install the Attix5 Pro Backup Client and reconnect to the Backup Account.
4. Restore the SharePoint content database to disk.
5. Using SQL Management Studio, restore the content database to the SQL Server used by SharePoint. You may need to rename the database and change the filenames you are restoring to in order to avoid filename conflicts with existing databases.

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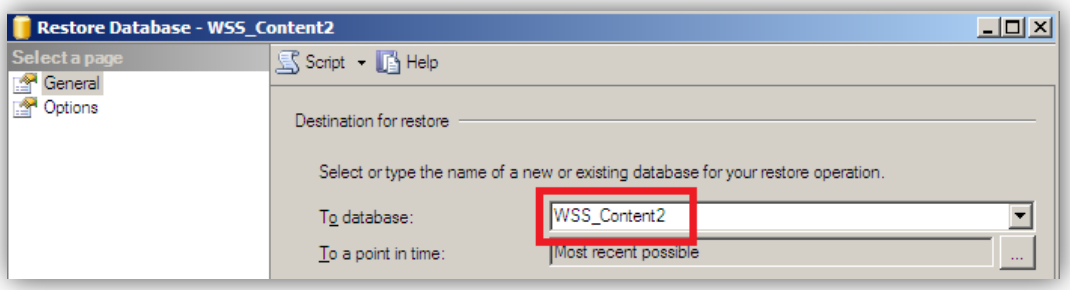

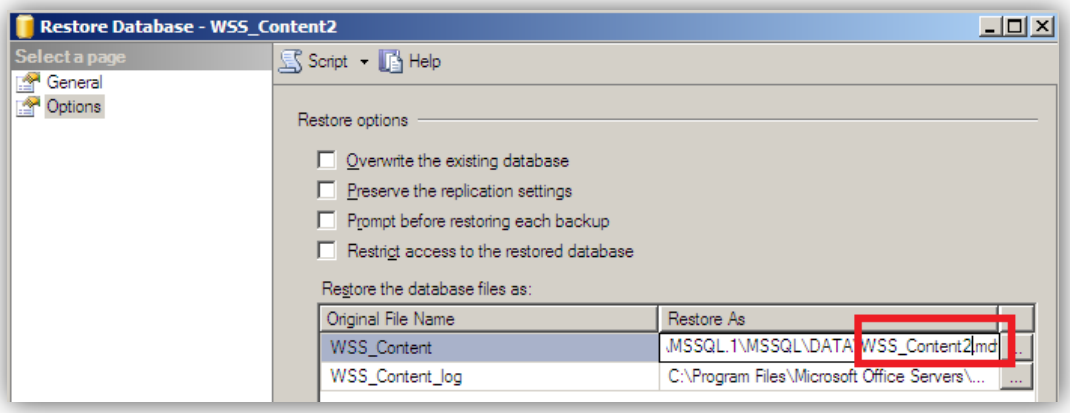

6. In SharePoint Central Administration, navigate to **Application Management > Create** or **extend Web application**. On the next page click **Create a new Web application**.
7. You should now create a new web application using a temporary database that will be removed and replaced with the database restored to the SQL server. Select the following options:
   - Select **Create a new IIS web site**
   - Change the port and path as appropriate
   - Select **Use existing application pool**
     The database server will be configured by default.
   - Set the database name to a temporary name such as “WSS_Content_TEST”
   - Note the web application URL for later use
   - Click **OK** to create the web application

Note: Existing web applications that would conflict with the restored web application should be reconfigured or deleted before adding the new web application.

Example: *If the web application was using port 80 when backed up, and you wish to continue using port 80 on the restored machine but there is already an application using port 80, first delete or reconfigure the existing application.*

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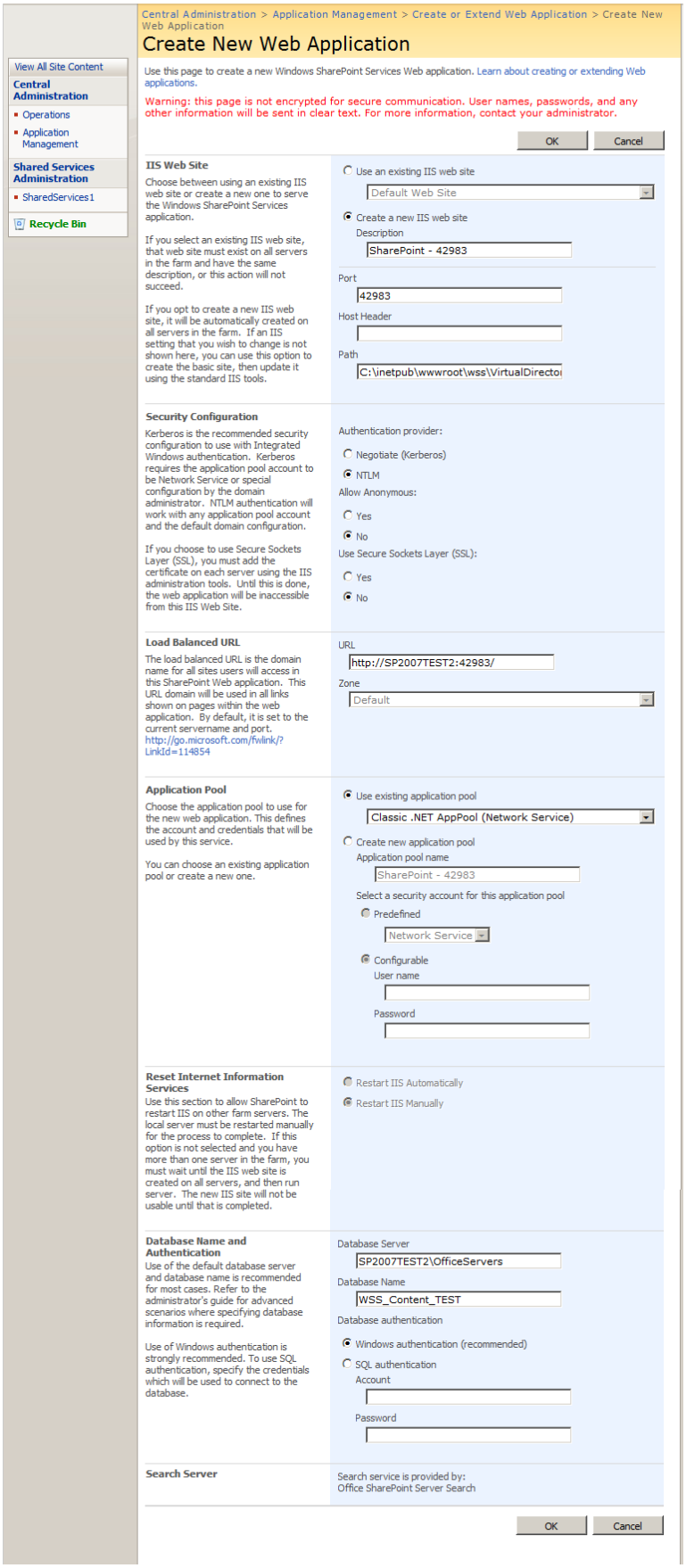
Central Administration > Application Management > Create or Extend Web Application > Create New Web Application
Create New Web Application
View All Site Content
Central Administration
Operations
Application Management
Shared Services Administration
SharedServices1
Recycle Bin
Use this page to create a new Windows SharePoint Services Web application. Learn about creating or extending Web applications.
Warning: this page is not encrypted for secure communication. User names, passwords, and any other information will be sent in clear text. For more information, contact your administrator.
OK
Cancel
IIS Web Site
Choose between using an existing IIS web site or create a new one to serve the Windows SharePoint Services application.
If you select an existing IIS web site, that web site must exist on all servers in the farm and have the same description, or this action will not succeed.
If you opt to create a new IIS web site, it will be automatically created on all servers in the farm. If an IIS setting that you wish to change is not shown here, you can use this option to create the basic site, then update it using the standard IIS tools.
Use an existing IIS web site
Default Web Site
Create a new IIS web site
Description
SharePoint - 42983
Port
42983
Host Header
Path
C:\inetpub\wwwroot\wss\VirtualDirecto
Security Configuration
Kerberos is the recommended security configuration to use with Integrated Windows authentication. Kerberos requires the application pool account to be Network Service or special configuration by the domain administrator. NTLM authentication will work with any application pool account and the default domain configuration.
If you choose to use Secure Sockets Layer (SSL), you must add the certificate on each server using the IIS administration tools. Until this is done, the web application will be inaccessible from this IIS Web Site.
Authentication provider:
Negotiate (Kerberos)
NTLM
Allow Anonymous:
Yes
No
Use Secure Sockets Layer (SSL):
Yes
No
Load Balanced URL
The load balanced URL is the domain name for all sites users will access in this SharePoint Web application. This URL domain will be used in all links shown on pages within the web application. By default, it is set to the current servername and port.
http://go.microsoft.com/fwlink/?LinkId=114854
URL
http://SP2007TEST2:42983/
Zone
Default
Application Pool
Choose the application pool to use for the new web application. This defines the account and credentials that will be used by this service.
You can choose an existing application pool or create a new one.
Use existing application pool
Classic .NET AppPool (Network Service)
Create new application pool
Application pool name
SharePoint - 42983
Select a security account for this application pool
Predefined
Network Service
Configurable
User name
Password
Reset Internet Information Services
Use this section to allow SharePoint to restart IIS on other farm servers. The local server must be restarted manually for the process to complete. If this option is not selected and you have more than one server in the farm, you must wait until the IIS web site is created on all servers, and then run server. The new IIS site will not be usable until that is completed.
Restart IIS Automatically
Restart IIS Manually
Database Name and Authentication
Use of the default database server and database name is recommended for most cases. Refer to the administrator's guide for advanced scenarios where specifying database information is required.
Use of Windows authentication is strongly recommended. To use SQL authentication, specify the credentials which will be used to connect to the database.
Database Server
SP2007TEST2\OfficeServers
Database Name
WSS_Content_TEST
Database authentication
Windows authentication (recommended)
SQL authentication
Account
Password
Search Server
Search service is provided by:
Office SharePoint Server Search
OK
Cancel

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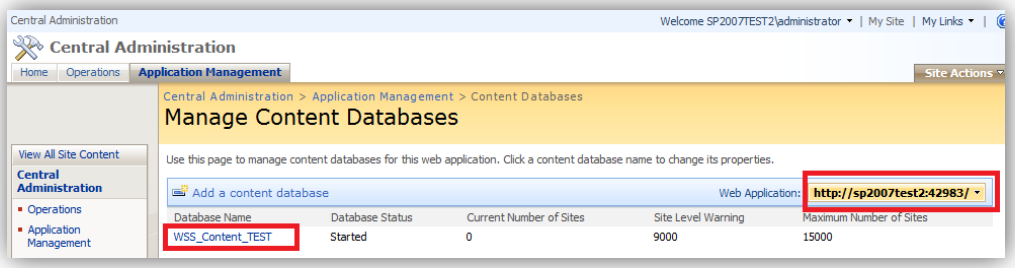
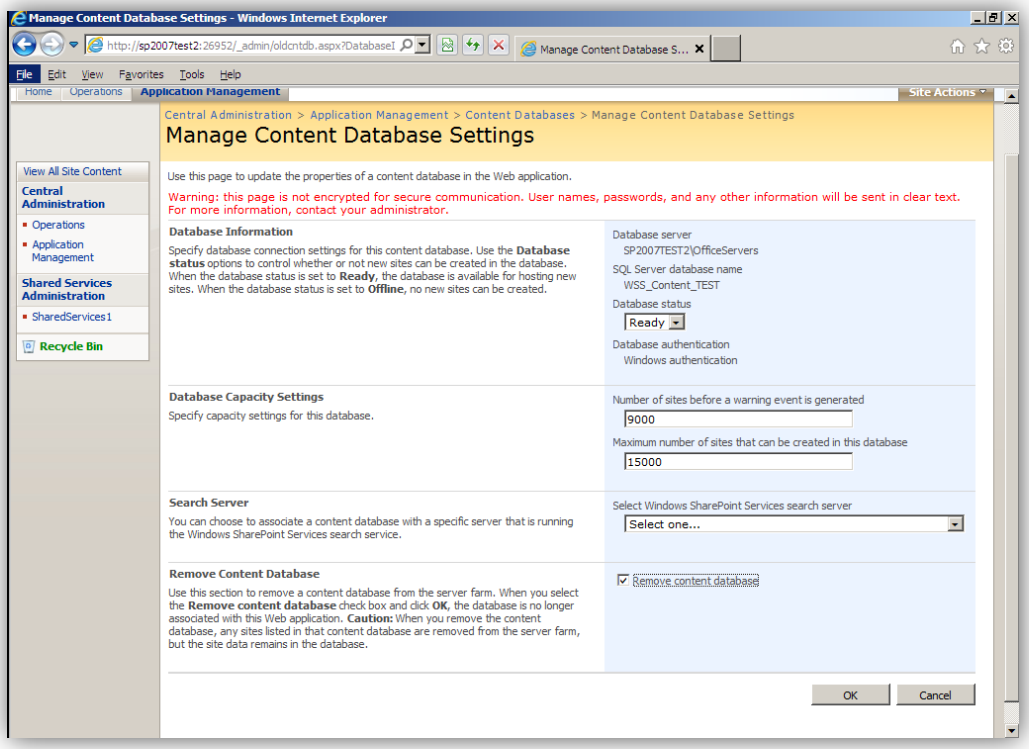
8. Navigate to **Central Administration > Application Management** and click **Content databases**. On the Manage Content Databases page, change the web application to the newly created web application. Click the database name.



9. Select the **Remove content database** checkbox and click **OK**.


Manage Content Database Settings - Windows Internet Explorer
http://sp2007test2:26952/_admin/oldcntdb.aspx?DatabaseI
Manage Content Database S...
File Edit View Favorites Tools Help
Home
Operations
Application Management
Site Actions
Central Administration > Application Management > Content Databases > Manage Content Database Settings
Manage Content Database Settings
View All Site Content
Central Administration
Operations
Application Management
Shared Services Administration
SharedServices1
Recycle Bin
Use this page to update the properties of a content database in the Web application.
Warning: this page is not encrypted for secure communication. User names, passwords, and any other information will be sent in clear text. For more information, contact your administrator.
Database Information
Specify database connection settings for this content database. Use the Database status options to control whether or not new sites can be created in the database. When the database status is set to Ready, the database is available for hosting new sites. When the database status is set to Offline, no new sites can be created.
Database server
SP2007TEST2\OfficeServers
SQL Server database name
WSS_Content_TEST
Database status
Ready
Database authentication
Windows authentication
Database Capacity Settings
Specify capacity settings for this database.
Number of sites before a warning event is generated
9000
Maximum number of sites that can be created in this database
15000
Search Server
You can choose to associate a content database with a specific server that is running the Windows SharePoint Services search service.
Select Windows SharePoint Services search server
Select one...
Remove Content Database
Use this section to remove a content database from the server farm. When you select the Remove content database check box and click OK, the database is no longer associated with this Web application. Caution: When you remove the content database, any sites listed in that content database are removed from the server farm, but the site data remains in the database.
Remove content database
OK
Cancel

10. The restored database now needs to be attached to the new web application. Open the Command Prompt and navigate to C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\Bin\. Run the following command:

```
stsadm –o addcontentdb –url <web application's URL> -
databaseserver <Server>\<Database Instance> -databasename
<Restored database name> -assignnewdatabaseid
```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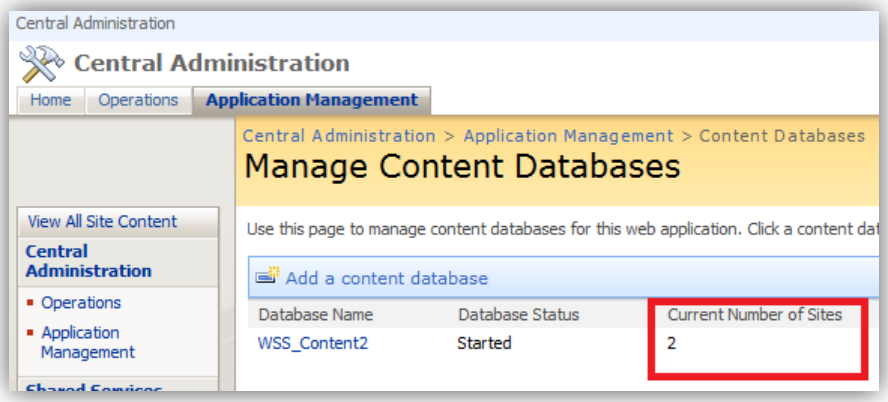
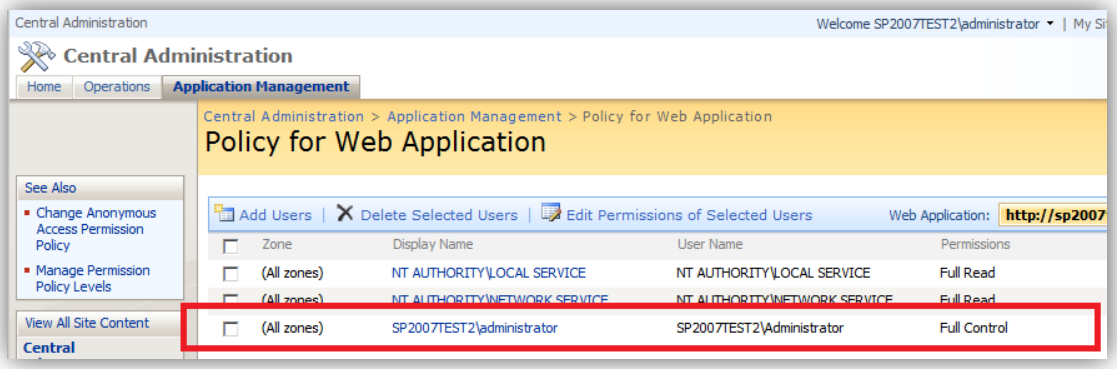
> *Example:* `stsadm -o addcontentdb -url http://sp2007test2:42983 -databaseserver SP2007TEST2\OFFICESERVERS -databasename WSS_Content2 -assignnewdatabaseid`

11. Check that the site collections have been restored to the new server. Navigate to **Central Administration > Application Management** and click **Content Databases**. Select the correct web application as noted previously. Note the current number of sites. This should correspond to the sites backed up from the original machine.



12. In **Central Administration > Account Management** click **Policy for Web Application** and grant your administrative account full control of the account.



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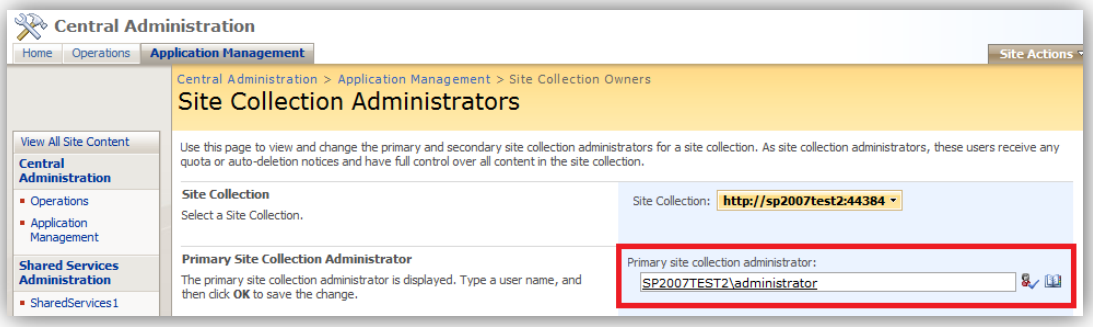
13. If your Site Collection Administrator is not an Active Directory user, in **Central Administration > Account Management** click on **Site Collection Administrators**. Even if the user has not changed, click **OK** to reconfirm the Site Collection Administrator user. Windows uses unique security IDs for user accounts and these will differ from the machine where the content database was backed up.


Central Administration
Home
Operations
Application Management
Site Actions
Central Administration > Application Management > Site Collection Owners
Site Collection Administrators
View All Site Content
Central Administration
Operations
Application Management
Shared Services Administration
SharedServices1
Use this page to view and change the primary and secondary site collection administrators for a site collection. As site collection administrators, these users receive any quota or auto-deletion notices and have full control over all content in the site collection.
Site Collection
Select a Site Collection.
Site Collection: http://sp2007test2:44384
Primary Site Collection Administrator
The primary site collection administrator is displayed. Type a user name, and then click OK to save the change.
Primary site collection administrator:
SP2007TEST2\administrator

14. You should now confirm that the site bindings are correct within IIS Manager and that Windows Firewall allows access to the SharePoint site on the specified port.
15. Using a web browser connect to the URL of the content database, e.g. http://sp2007test2:42983, enter the credentials for your administrative account and you should be able to access the backed up sites.
16. You should now configure the correct access permissions for your SharePoint site(s), and change any other critical settings such as ports and bindings in order to bring the SharePoint server back into active service. You may need to reconfigure:
    - Forms Based Authentication
    - Alternate Address Mappings
    - Web.config modifications
    - Web application extensions
    - SSL certificates
    - Kerberos settings
    - Other customisation settings

Note: *Custom SharePoint solutions should be redeployed before restoring content databases.*

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SharePoint 2010

Backup

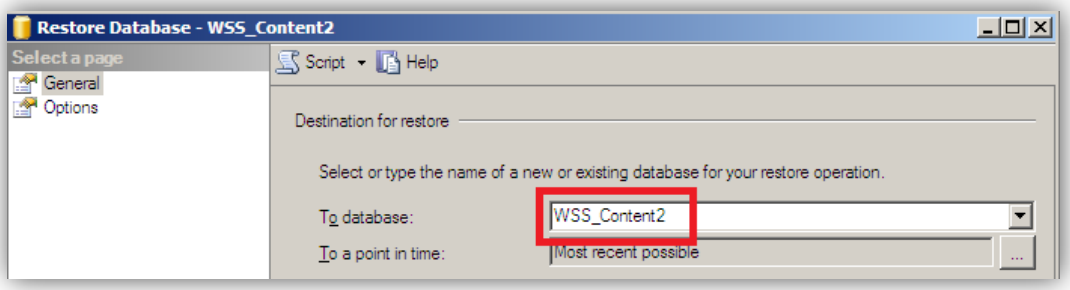
1. Using the MS SQL plug-in, select the content databases you wish to back up. Maintenance should be set to “NONE”.
2. When the backup runs, the MS SQL plug-in will write the database out to disk, allowing it to be patched in the normal way.

> ***Notes:***
> - *The VSS plug-in is not currently supported.*
> - *If SharePoint uses the Windows Internal Database, also known as SQL Server Embedded Edition (SSEE), this is not currently supported.*

Restore

In a non-DR scenario, e.g. where a content database has been corrupted, a SQL level restore of the content database can be performed. In a full DR scenario where the machine itself has been lost, follow these steps:

1. Install Windows onto a new machine.
2. Install SharePoint, making sure that the version matches that of your backed up database.
3. Install the Attix5 Pro Backup Client and reconnect to the Backup Account.
4. Restore the SharePoint content database to disk.
5. Using SQL Management Studio, restore the content database to the SQL Server used by SharePoint. You may need to rename the database and change the filenames you are restoring to in order to avoid filename conflicts with existing databases.



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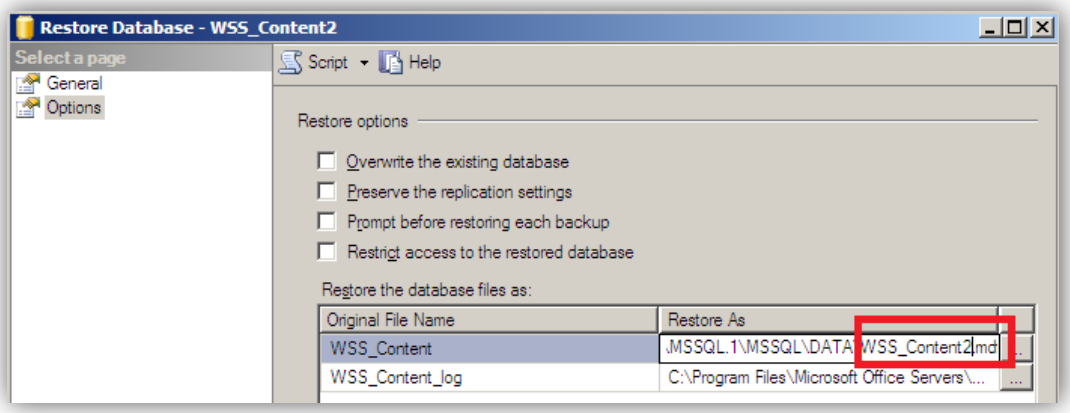
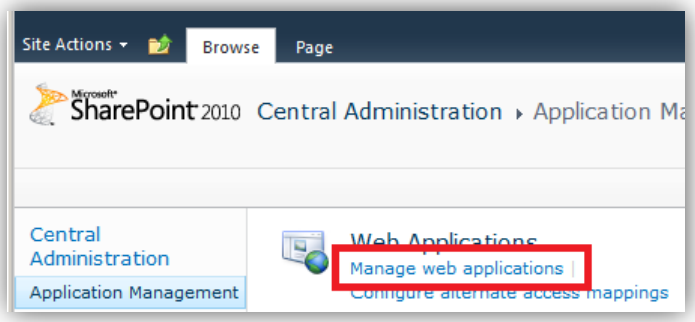
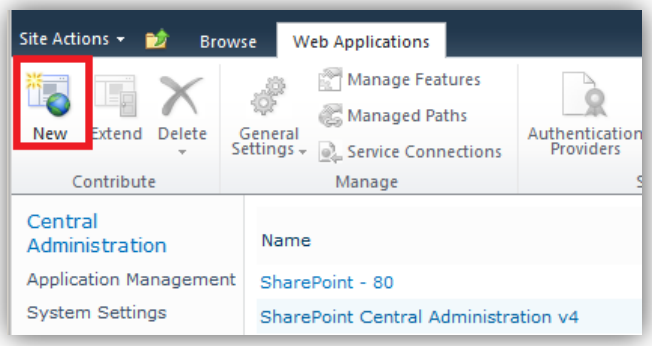


6. In SharePoint Central Administration, navigate to **Application Management > Manage web applications**.



7. On the next page click **New**.



8. You should now create a new web application using a temporary database that will be removed and replaced with the database restored to the SQL server. Select the following options:
   - Select **Create a new IIS web site**
   - Change the port and path as appropriate
   - Select **Use existing application pool**
   - The database server will be configured by default

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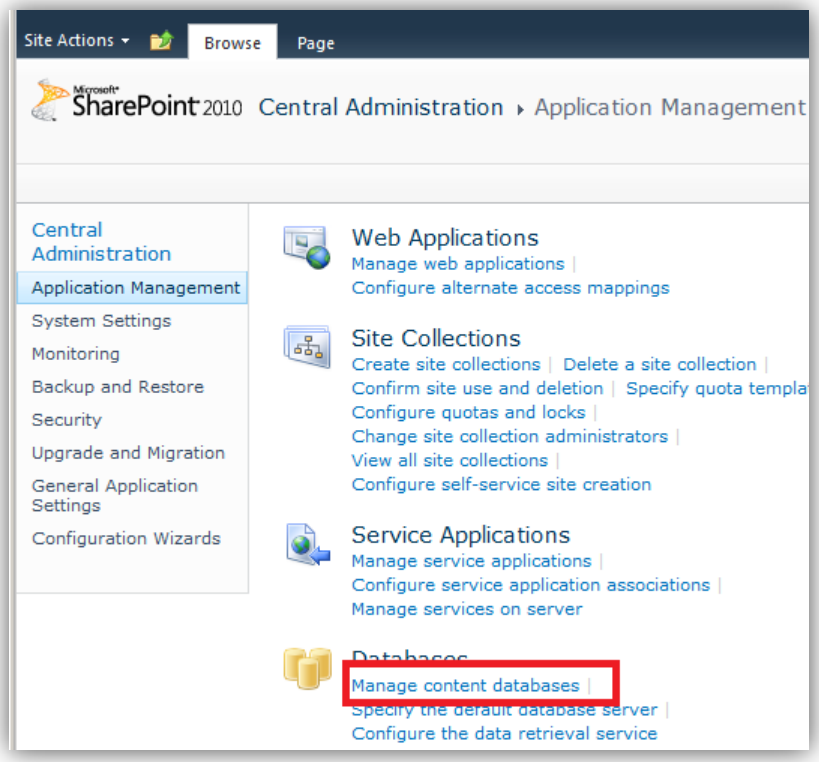
- Set the database name to a temporary name such as “WSS_Content_TEST”
- Note the web application URL for use later
- Click **OK** to create the web application

> ***Note:*** *Existing web applications that would conflict with the restored web application should be reconfigured or deleted before adding the new web application.*
>
> > **Example:** *If the web application was using port 80 when backed up, and you wish to continue using port 80 on the restored machine but there is already an application using port 80, first delete or reconfigure the existing application.*

9. Navigate to **Central Administration > Manage web applications > Manage content databases.** Select the temporary database you created.



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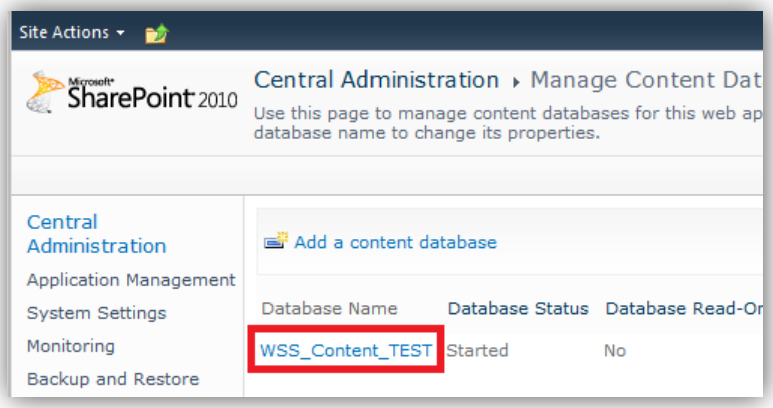
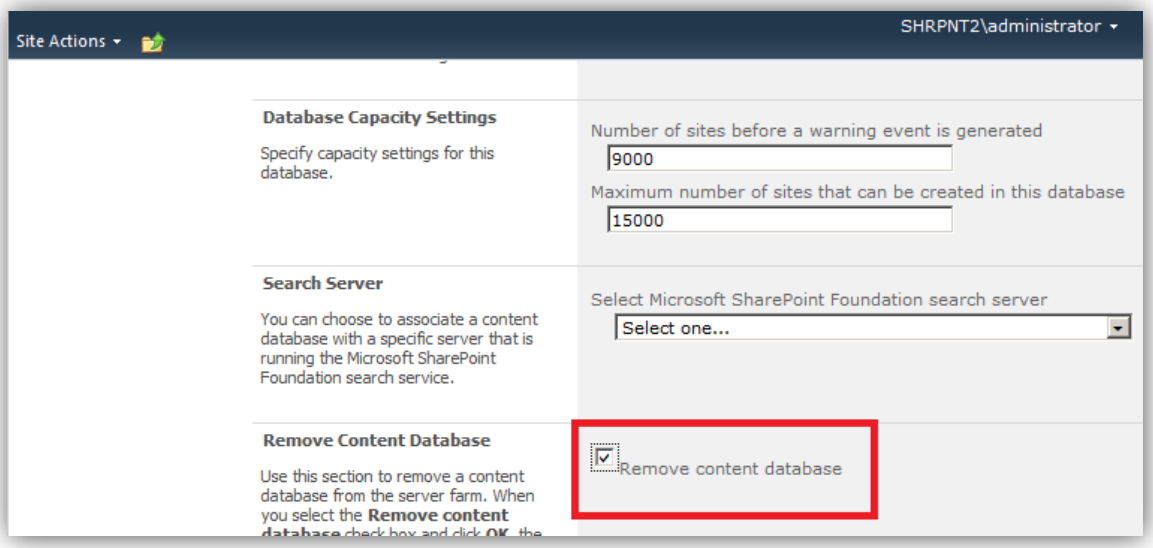


10. Select the **Remove content database** checkbox and click **OK**.


Site Actions
SHRPNT2\administrator
Database Capacity Settings
Specify capacity settings for this database.
Number of sites before a warning event is generated
9000
Maximum number of sites that can be created in this database
15000
Search Server
You can choose to associate a content database with a specific server that is running the Microsoft SharePoint Foundation search service.
Select Microsoft SharePoint Foundation search server
Select one...
Remove Content Database
Use this section to remove a content database from the server farm. When you select the Remove content
Remove content database

11. The restored database now needs to be attached to the new web application. Open the Command Prompt and navigate to C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\Bin\. Run the following command:

```
stsadm –o addcontentdb –url <web application's URL> -
databaseserver <Server>\<Database Instance> -databasename
<Restored database name> -assignnewdatabaseid
```

> *Example: stsadm –o addcontentdb –url http://shrpnt2:38000 -databaseserver SHRPNT2\SHAREPOINT -databasename WSS_Content2 -assignnewdatabaseid*

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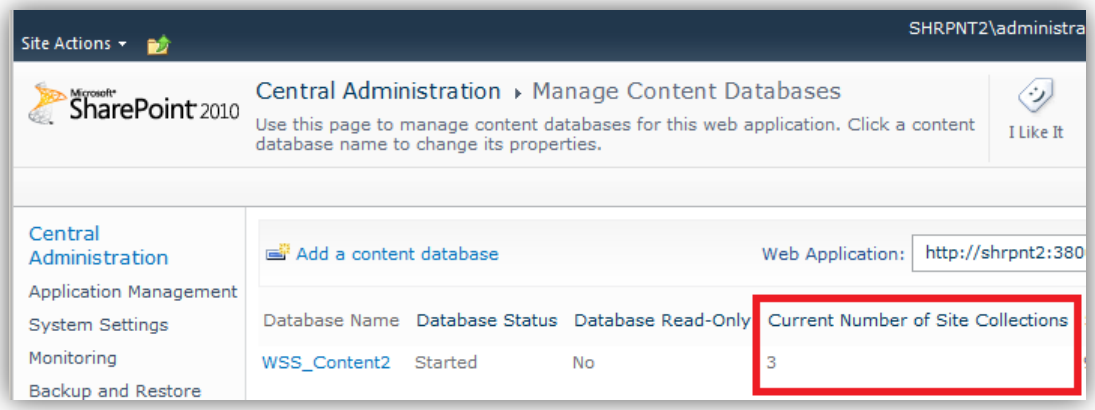
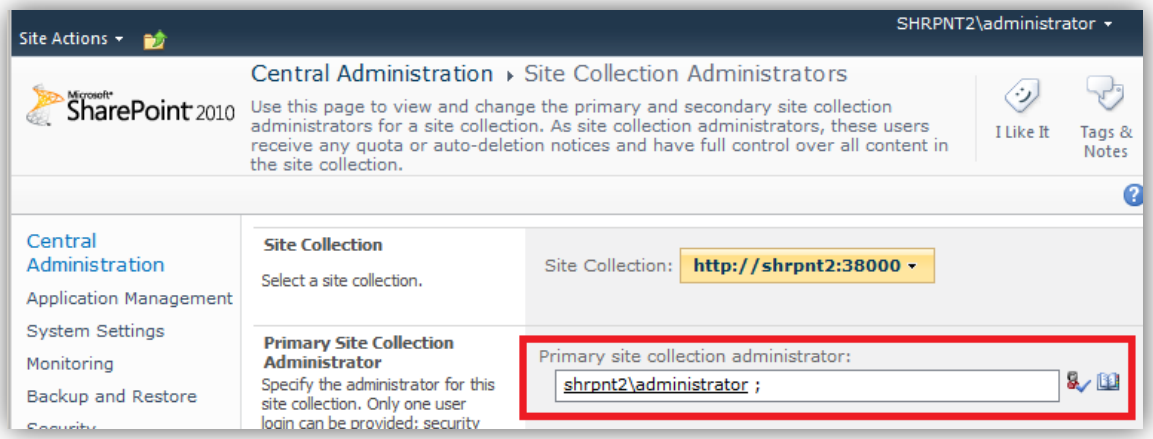
12. You now need to check that the site collections have been restored to the new server. Navigate to **Central Administration > Application Management** and click **Manage Content Databases**. For the new web application, note the current number of site collections. This should correspond to the sites backed up from the original machine.



13. In **Central Administration > Application Management** click **Change site collection administrators**. Even if the user has not changed, click **OK** to reconfirm the Site Collection Administrator user. Windows uses unique security IDs for user accounts and these will differ from the machine where the content database was backed up.


Site Actions
SHRPNT2\administrator
SharePoint 2010
Central Administration ▸ Site Collection Administrators
Use this page to view and change the primary and secondary site collection administrators for a site collection. As site collection administrators, these users receive any quota or auto-deletion notices and have full control over all content in the site collection.
I Like It
Tags & Notes
Central Administration
Application Management
System Settings
Monitoring
Backup and Restore
Site Collection
Select a site collection.
Site Collection:
http://shrpnt2:38000
Primary Site Collection Administrator
Specify the administrator for this site collection. Only one user login can be provided; security
Primary site collection administrator:
shrpnt2\administrator ;

14. You should now confirm that the site bindings are correct within IIS Manager, and that Windows Firewall allows access to the SharePoint site on the specified port.
15. Using a web browser, connect to the URL of the content database, e.g. http://shrpnt2:38000 and enter the credentials for your administrative account. You should be able to access the backed up sites.
17. You should now configure the correct access permissions for your SharePoint site(s), and change any other critical settings such as ports and bindings in order to bring the SharePoint server back into active service. You may need to reconfigure:
    - Forms Based Authentication

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- Alternate Address Mappings
- Web.config modifications
- Web application extensions
- SSL certificates
- Kerberos settings
- Other customisation settings

Note: *Custom SharePoint solutions should be redeployed before restoring content databases.*

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Appendix: Scripting IIS settings - backup and restore

IIS7 can be scripted to back up using the command-line application **appcmd.exe**. Appcmd is located in the %windir%\system32\inetsrv\ directory and should be run as follows:

```
%windir%\system32\inetsrv\appcmd.exe add backup <backupname>
```

Example: *C:\Windows\system32\inetsrv\appcmd.exe add backup "a5iis7backup"*

To restore the IIS configuration, run the following:

```
%windir%\system32\inetsrv\appcmd.exe restore backup <backupname>
```

Example: *C:\Windows\system32\inetsrv\appcmd.exe restore backup "a5iis7backup"*

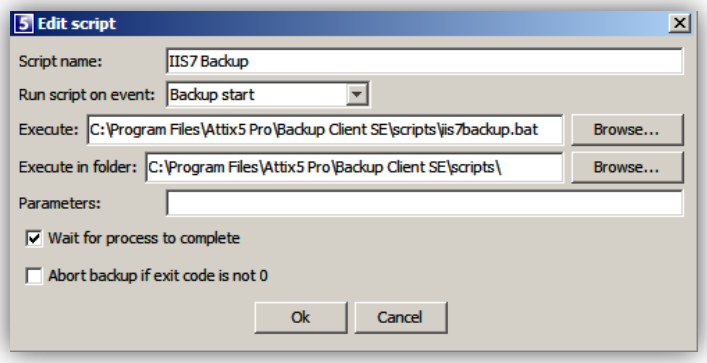
Attix5 Pro can be set to automate the appcmd backup using the following steps:

1. Create a script file called "iis7backup.bat" containing the following lines:

   ```
   REM delete old copy
   rmdir /s /q %windir%\System32\inetsrv\backup\a5iis7backup\
   REM back up using appcmd
   %windir%\System32\inetsrv\appcmd.exe add backup "a5iis7backup"
   ```

2. In the Attix5 Pro script plug-in, create an IIS7 Backup Script.
3. Set the script to run at Backup Start and execute the batch file script you have created. Set the **Execute in folder** to be the same path where the script is located. No parameters are needed. Select the **Wait for process to complete** checkbox.

   Example:



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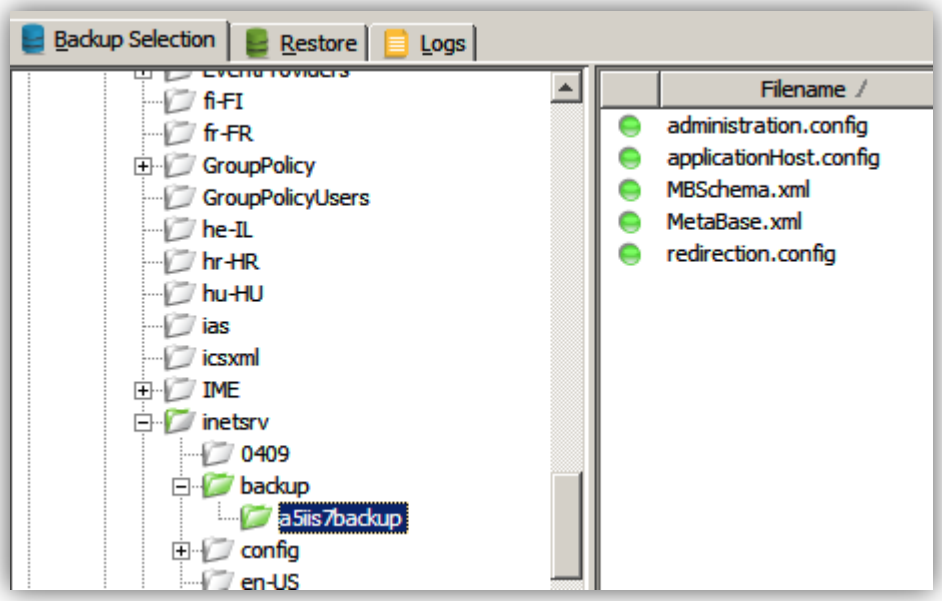
In the backup selection tree, make sure that the %windir%\System32\inetsrv\backup\ path is selected:



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